

Zero Exponent Rule

$$7^0 = 1 \quad 12^0 = 1 \quad 124^0 = 1$$

↳ a power with exponent of zero, is equal to 1.

Be careful with negative bases.

$$5^0 = 1$$

$$\underbrace{-}_{\downarrow} \underbrace{5^0}_{\downarrow} = -1$$

$$(-5)^0 = 1$$

$$-(-5)^0 = -1$$

One Exponent Rule

$$7^1 = 7 \quad 12^1 = 12 \quad 124^1 = 124$$

↳ a power with an exponent of 1, equals the base.

Negatives

$$12643' = 12643$$

$$-12643' = -12643$$

$$(-12643)' = -12643$$

$$-(-12643)' = 12643$$

Powers of 10

$$10^4 = 10000$$

$$10^3 = 1000$$

$$10^7 = 10000000$$

→ the number of zeros is equal to the exponent.

Ex. Write 7393 using powers of ten.

$$7000 + 300 + 90 + 3$$

$$(7 \times 1000) + (3 \times 100) + (9 \times 10) + (3 \times 1)$$

$$= (7 \times 10^3) + (3 \times 10^2) + (9 \times 10^1) + (3 \times 10^0)$$

Ex. Write in Standard Form

$$(6 \times 10^8) + (8 \times 10^6) + (4 \times 10^3) + (2 \times 10^0)$$

6	0	8	0	0	4	0	0	2
8	7	6	5	4	3	2	1	0